



**United States Department of
Health & Human Services**

**Enterprise Architecture
Program Management Office**

HHS Enterprise Architecture Segments

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Document Change History

Version Number	Release Date	Summary of Changes
1.0		Origination of Document.

1 Enterprise Architecture Segments

1.1 *Rationale for Segments*

A segment perspective has been adopted by OMB as a strategy for building out the Federal Enterprise Architecture with the Line of Business (LoB) initiatives. Version 2.0 of the OMB EA Assessment Framework includes numerous references to the development and use of segment architectures. For example, “segment architectures are developed for each agency line of business, including Services for Citizens, as well as Support Lines of Business.” According to the Assessment Framework, “segment architecture is the IT architecture for an individual line of business or common technology service and has more detail than the overall EA. A segment architecture is at the level where measurable results (performance improvement, cost reduction) can be achieved.”

Architecture segments consist of focused architecture efforts, such as a common architecture for administrative systems or the architecture for a major program area. The segment approach promotes the incremental development of architecture segments within a structured enterprise architecture framework. Focusing on segments reduces the complexity of the effort and can enable EA investment results to be delivered and realized sooner, similar to how an incremental build approach can deliver more rapid results in software development initiatives. Segments can be addressed in priority order or in parallel, given sufficient resources.

Segments enable collaboration. As segments become socialized, collaboration between business and technical organizations in support of business operations is expected to increase. Segments cross organizational, functional, and technical boundaries by creating an interlocking perspective for business processes, work and data flow, investment and budget, and technical solutions. Business owners, enterprise architects, IT developers, and executives will come together as entities such as Integrated Program Teams to create an optimized segment solution.

Segments are part of an integrated enterprise. Other programs such as CPIC, Security and Performance are enhanced by segments, as is Enterprise Architecture. Segment perspectives provide greater opportunities for investment management, data sharing, collaboration, reuse and informed decision making.

Given the size and complexity of HHS, evolving the HHS Enterprise Architecture using a segment approach offers a number of advantages over an OPDIV-centric or investment-only approach:

- **More Business-Driven:** Shifts IT infrastructure management focus from organizational to functional, service-oriented view
- **Increased Efficiency and Effectiveness Opportunities:** Enables HHS infrastructure to support each Business Segment, providing greater opportunities for enterprise-wide collaboration and reuse
- **Increased Business-Process and Service Improvement Opportunities:** Enables IT resources to be allocated to highest value initiatives within areas involving similar programs, grants, IT and other investments
- **Improved Opportunities for Enterprise Performance Management:** Enables performance definition and management by functional area across the HHS IT enterprise
- **Improved support for National Health Information Technology:** Organizes broader range of HHS opinions of Subject Matter Experts which can be leveraged to inform the Federal Health Architecture Program, the Office of the National Coordinator for Health IT, Health IT vendors, Standards entities and Legislative bodies
- **Satisfies GAO Recommendations:** Provides framework for IT to meet GAO Recommendation for Increased Business Participation in CPIC
- **Meets Federal Government Management Expectations:** Satisfies OMB Requirement for Segment Architecture

Segments will help the HHS EA Program meet the architecture goals: interoperability, data sharing, overall efficiency and effectiveness. Additionally, full implementation of the HHS segment strategy will strengthen the “Completion, Use, and Results Capabilities” of the EA program, as measured using the OMB version 2.0 EA Assessment Framework. Completion and Use of the HHS EA can be better coordinated at the segment level. Segments will be business-driven; promote collaboration and reuse; provide greater focus on opportunities for business process and service improvement; align IT implementation improvements to accommodate initiatives such as Service Oriented Architecture (SOA) and Internet Protocol, version 6 (IPV6); and support eGov and LoB alignment.

1.2 Segment Descriptions

1.2.1 Organize Business Functions within Department-level Segments of the HHS Enterprise Architecture

Segments are aligned to the HHS Business Reference Model and organized as illustrated in Figure 1 on the next page:

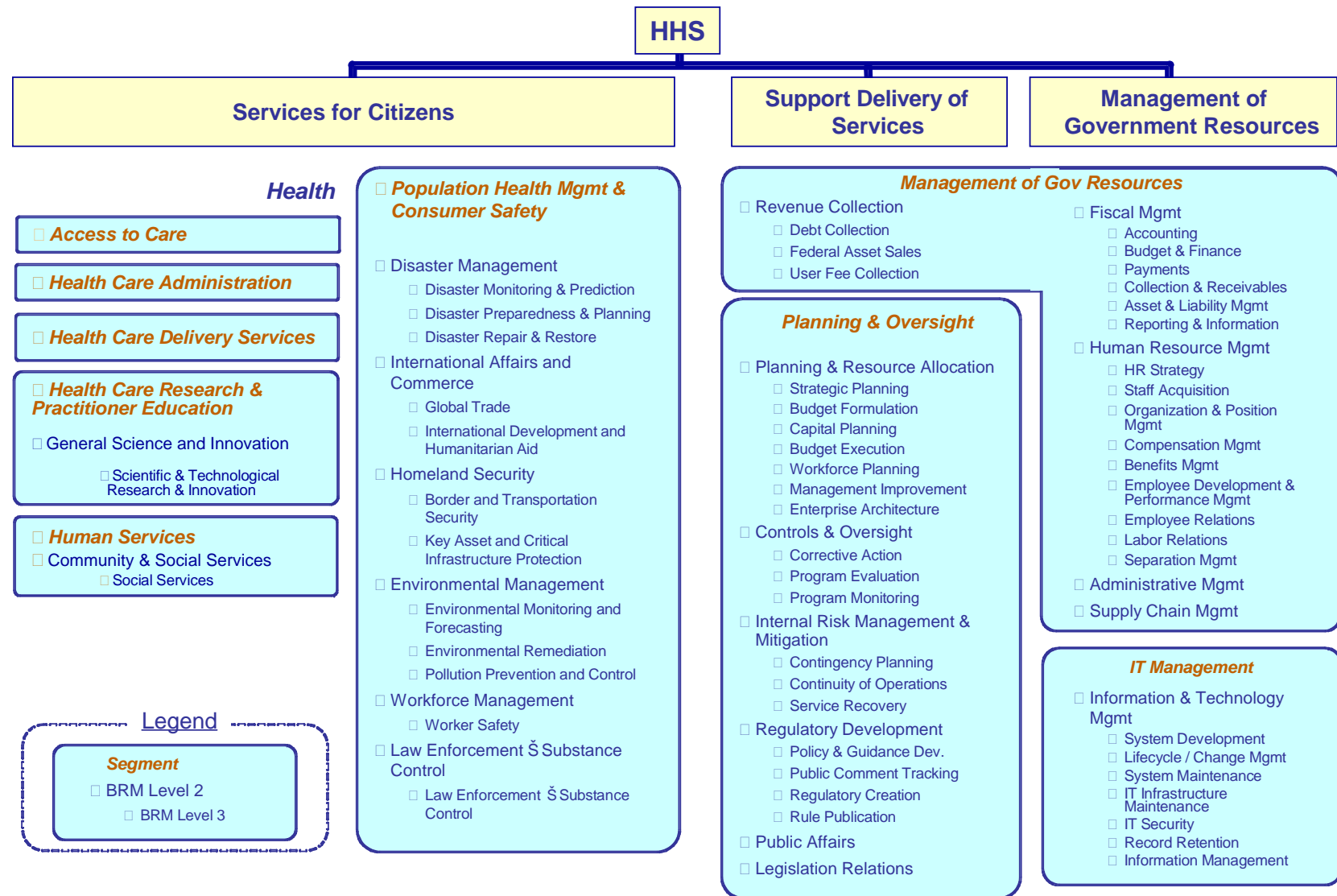


Figure 1, Segments

The above segment diagram illustrates the Department-level segments of the HHS enterprise architecture. To maximize the business-driven aspect of the architecture, the high level segments represent groups of similar HHS programs and stakeholders. Note that there is not a 1:1 mapping between relevant FEA LoB's or sub-functions and these HHS segments. The Service to Citizens segments are based on the five BRM Health sub functions plus the Community and Social Services sub function identified by the FEA. Related functions from other BRM LoB's are included under the health segments (e.g. Population Health and Consumer Safety) because they belong to common programs, have the same set of stakeholders, or have common information needs. The Department-level segments support the primary goal of HHS EA: increased information sharing across the enterprise.

1.2.2 Define Detailed Segments within Department-level Segments

Since the depth and detail of the EA varies with its intended use as well as size and complexity of the enterprise, the level of detail expressed in a given segment is variable. At the Department level, the segment scope encompasses the entire enterprise to provide context and insight into relationships and dependencies among HHS lines of business. Increasing degrees of detail are expressed at the OPDIV or enterprise program level. For example, CMS has identified Lines of Business, which express additional detail for the HHS Health Care Administration segment.

This iterative grouping of segments within related higher-level segments is consistent with the HHS federated architecture, and is a key concept of the HHS EA Segment approach. The federated environment implemented within the HHS EA supports this approach. Department-level segments are based on a rollup of more detailed segment architectures.

For example, the Management of Government Resources segment includes a number of functions that could be defined as separate segments, for example Human Resources or Financial Management, each of which has a separate IT architecture. Program areas have expressed a need for increased interaction and data sharing to support business requirements within and among segments. Using segments to assess and transact business harmonization and performance improvement opportunities, by segment as well as sub-segment, will provide value to multiple HHS stakeholders across the HHS enterprise.

1.2.3 Integrate with Capital Planning & Investment Control (CPIC)

Business leaders for each segment play a critical role in the CPIC process by providing perspective on how their segment within HHS supports each business function. As segments and associated architectures evolve, opportunities will be identified to improve the effectiveness and efficiency of the segments. These opportunities will be prioritized by the Segment Critical Partners and implemented within the appropriate investments.

The figure below illustrates how segment input will influence the IT portfolio across the Select, Control and Evaluate phases of CPIC.

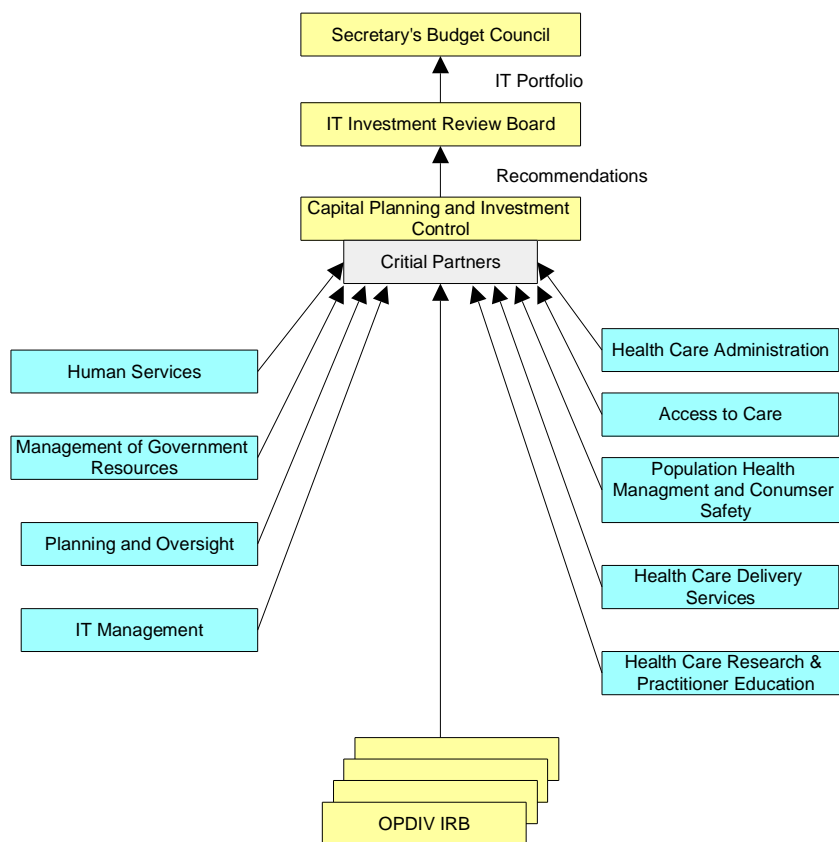


Figure 2, CPIC and Segments

Appendix A: Acronyms

ASPE	Office of the Assistant Secretary for Planning and Evaluation
BRM	Business Reference Model
CEA	Chief Enterprise Architect
CPIC	Capital Planning and Investment Control
EA	Enterprise Architecture
E-Gov	Electronic Government initiatives
EARB	Enterprise Architecture Review Board
EPLC	Enterprise Performance Lifecycle
FEA	Federal Enterprise Architecture
FEAF	Federal Enterprise Architecture Framework
FY	Fiscal Year
GAO	Government Accountability Office (formerly known as the General Accounting Office)
GPRA	Government Performance and Results Act
HHS	Health and Human Services, Department of
IPV6	Internet Protocol version 6
IT	Information Technology
ITIRB	Information Technology Investment Review Board
LoB	Line of Business
OMB	Office of Management and Budget
OPDIV	Operating Divisions
PART	Program Analysis and Rating Tool
STAFFDIV	Staff Divisions

Appendix B: References

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2. Chief Information Officers Council, *Architecture Alignment and Assessment Guide*, October 2000
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